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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,640	02/28/2002	Stephen C. Jacobsen	T8719	8541

7590 05/06/2003

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EXAMINER

WAKS, JOSEPH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,640

Applicant(s)

JACOBSEN, STEPHEN C.

Examiner

Joseph Waks

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7-11, 13, 14 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 12, 15 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Please add in page 2, line 2, after "filed November 12, 1999" insert: --now US Patent No. 6,375,454 issued April 23, 2002--, and line 3, after "July 28, 2000" insert: --now US Patent No. 6,425,740 issued July 30, 2002--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Espenschied (US 2,539,535).

Espenschied discloses invention as claimed: a resonant electrical generation system, including a resonator 1, 3 configured to provide resonating movement in a resonating element 7, an energy source 19 operatively coupled to the resonator and supporting the resonating movement of the resonating element, and an electrical generator 15 operatively coupled to and driven by the resonator configured to generate electrical power from the resonating movement.

4. Claims 1, 2 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Tubel et al. (US 5,839,508).

Tubel et al. disclose in Figures 7A and 8 invention as claimed: a resonant electrical generation system, including a resonator 24 configured to provide resonating movement in a resonating element, an energy source 22 operatively coupled to the resonator and supporting the resonating movement of the resonating element, and an electrical generator 100, 112 operatively coupled to and driven by the resonator configured to generate electrical power from the resonating movement, the resonator including the base 108, a spring 106 coupled on one end to the base and on the other end to the mass 102.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8, 10, 11, 13, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tubel et al. (US 5,839,508) in view of Espenschied (US 2,539,535).

Tubel et al. disclose the system essentially as claimed. However, Tubel et al. do not disclose the energy source including an elongated combustion tube having a mixing chamber and an exhaust port, a fuel source, coupled to the mixing chamber of the combustion tube configured to provide fuel to the combustion tube and an igniter, disposed in the combustion tube configured to ignite the fuel.

Espenschied discloses the energy source including an elongated combustion tube having a mixing chamber and an exhaust port, a fuel source, coupled to the mixing chamber of the combustion tube configured to provide fuel to the combustion tube and an igniter, disposed in the

combustion tube, configured to ignite the fuel for the purpose of providing the motive force to a generator.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the system as taught by Tubel et al. and to provide the elongated combustion tube having a mixing chamber and an exhaust port, a fuel source, coupled to the mixing chamber of the combustion tube configured to provide fuel to the combustion tube and an igniter, disposed in the combustion tube, configured to ignite the fuel as taught by Espenschied for the purpose of utilizing fossil fuels for the resonant electric generation system.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Espenschied (US 2,539,535) as applied to claim 10 above.

Espenschied discloses the claimed invention except for the resonator resonating at the range of frequencies between approximately 50 Hz to 2KHz. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the resonator working at a frequency range of 50 Hz to 2KHz for the purpose of minimizing the size of the system, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

8. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tubel et al. (US 5,839,508) in view Espenschied (US 2,539,535) as applied to claim 10 above.

The combined system discloses the claimed invention except for the resonator resonating at the range of frequencies between approximately 50 Hz to 2KHz. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the resonator

working at a frequency range of 50 Hz to 2KHz for the purpose of minimizing the size of the system, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Allowable Subject Matter

9. Claims 4, 6, 12, 15 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Re claims 4 and 12, the feature of the cylinder coupled to the exhaust port of the combustion tube, the piston reciprocally disposed in the cylinder, and the push rod coupled to the piston and the resonator, configured to transmit movement of the piston to the resonator, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Re claims 6, 15 and 19, the feature of the combustion tube having diameter less than approximately 1100 microns, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Prior Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.


JOSEPH WAKS
PRIMARY PATENT EXAMINER
TC-2800

JW
May 4, 2003